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APPENDIX XVIII.

TO THE

SECOND EDITION

OF THE

DESCRIPTIVE CATALOGUE

OF THE

PATHOLOGICAL SPECIMENS

CONTAINED IN

THE MUSEUM

OF

THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

BY

SAMUEL G. SHATTOCK,

PATHOLOGICAL CURATOR OF THE MUSEUM.

LONDON:

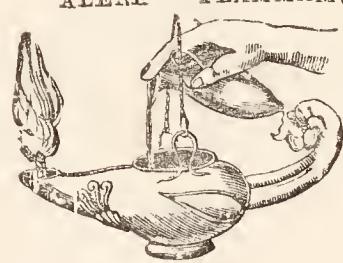
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P R E F A C E.

THIS Appendix contains descriptions of the Pathological Specimens added to the Museum during the year ending July 1st, 1904.

SAMUEL G. SHATTOCK.
July 1904.

TABLE OF CONTENTS.

	Page	Number
Series II.		
ATROPHY	1	24 A to 36 A
Series III.		
REPAIR AND REPRODUCTION . .	3	99 B to 114 A
Series VI.		
TUMOURS AND OTHER ALLIED } MORBID GROWTHS }	7	248 B to 456 C
Series XII.		
INJURIES AND DISEASES OF } BONE }	9	853 B to 877 T
Series XIV.		
INJURIES AND DISEASES OF } THE VERTEBRAL COLUMN }	20	2115 E

	Page	Number
Series XXI.		
INJURIES AND DISEASES OF THE PERITONEUM }	21	2336 B
Series XXII.		
INJURIES AND DISEASES OF THE STOMACH AND DUODENUM }	21	A 2398 A
Series XXV.		
ANATOMY OF HERNIÆ, ETC.	22	2667 A
Series XXVI.		
INJURIES AND DISEASES OF THE LIVER }	22	2739 B
Series XXVIII.		
DISEASES OF THE PANCREAS	23	2834 C
Series XXXI.		
DISEASES OF THE THYROID GLAND }	23	2908 Bf
Series XXXII.		
DISEASES OF THE PERICARDIUM AND OF THE HEART }	24	2928 A
Series XXXVIII.		
INJURIES AND DISEASES OF THE KIDNEYS }	25	3638 M to A 3584 D

	Page	Number
Series XL.		
INJURIES AND DISEASES OF } THE BRAIN	27	3752 A to 3782 C
Series XLI.		
INJURIES AND DISEASES OF } THE MEMBRANES OF THE } BRAIN	30	3864 A, 3864 B
Series XLIII.		
INJURIES AND DISEASES OF } NERVES	31	3925 A
Series XLIV.		
DISEASES OF THE NOSE	31	A 3926 A
Series XLVII.		
INJURIES AND DISEASES OF } THE SKIN	32	4053 A to 4110 B
Series XLVIII.		
DISEASES OF THE TESTICLE . . .	33	4225 B to 4289 A
Series LI.		
INJURIES AND DISEASES OF } THE PROSTATE GLAND	35	4355 O, 4360 F
Series LV.		
DISEASES OF THE FALLOPIAN } TUBES	37	4584 I

	Page	Number
Series LVIII.		
INJURIES AND DISEASES IN- CIDENTAL TO GESTATION } AND PARTURITION . . . }	38	4709 D, 4720 A
Series LIX.		
DISEASES OF THE BREAST . . .	39	4739 C, 4792 C
TERATOLOGY	40	53 A to 735 B

APPENDIX XVIII.

TO THE

PATHOLOGICAL CATALOGUE.

24 A. The brain of a Pigeon with the eyes.

The right optic nerve is reduced to an extremely slender thread from atrophy following upon some disease of the eye which has resulted in blindness. 1904.

[Transferred from the Physiological Collection.]

25 A. The bladder with the urethra as far as the penile portion, together with the vesiculæ seminales and terminal portions of the vasa deferentia of a Herdwick Sheep which was castrated as a lamb in June 1902, and killed in July 1903.

The vesiculæ are quite diminutive, not more than three quarters of an inch in length and a quarter of an inch where widest ; the terminal parts of the vasa deferentia exhibit a corresponding failure of growth, being less than half the normal diameter.

There is a marked failure, moreover, in the development of Cowper's glands, these bodies with their investing musculature measuring only 7 mm. in diameter.

The urethra, though of full length, is of lesser diameter than in the intact fully grown ram, from a diminution in the thickness of its muscular wall.

The condition of the prostate gland, which lies completely

hidden between the muscular wall of the urethra and the urethral mucosa, is not shown.

*Presented by S. G. Shattock, Esq., and
C. G. Seligmann, Esq., 1904.*

25 B. The parts of a fully grown Herdwick Sheep, corresponding to those shown in the preceding specimen. Each vas deferens was tied when the animal was a lamb. As compared with a dissection of the organs from a fully grown intact ram of the same breed, the vesiculæ, the terminal parts of the vasa deferentia, and Cowper's glands have attained the full size, and the urethra its full muscularity and diameter.

The development has proceeded quite symmetrically, although one testicle underwent atrophy after the operation (probably from interference with its blood-supply); the other testicle attained its full development.

(S. G. Shattock and C. G. Seligmann. *Trans. Path. Soc. vol. lvi.*)

*Presented by S. G. Shattock, Esq., and
C. G. Seligmann, Esq., 1904.*

25 c. The similar parts of a fully grown South-down Sheep, on which, when a lamb, vasotomy was carried out on one side, and castration on the other.

The vesiculæ, terminal parts of the vasa deferentia, Cowper's glands, and the urethral wall have all attained the full development, and symmetrically so on the two sides.

*Presented by S. G. Shattock, Esq., and
C. G. Seligmann, Esq., 1904.*

36 A. The testicle of a South-down Ram, on which when a lamb double vasotomy was carried out, the vas deferens being divided between two ligatures.

In consequence of some interference with the blood-supply complicating or following the operation, the testicle has undergone a remarkable degree of atrophy.

The operation was carried out March 3rd, 1902; on June 27th the right testicle was found to be quite small,

consisting of a lower mass about the size of a filbert (lower end of epididymis) and an upper of the same dimensions.

The vertical measurement of the entire organ, including the epididymis, is only 70 mm., and that of the body of the testicle alone 28 mm.

The extreme vertical measurement of the left organ, which attained the full size, was 100 mm., that of the body of the testicle being 80 mm.

The animal was killed slightly over a year after the operation.

*Presented by S. G. Shattock, Esq., and
C. G. Seligmann, Esq., 1904.*

99 B. Portion of the trunk of a fully grown Fowl, showing a complete reproduction of both testicles following what was thought to be a complete castration, carried out when the bird was quite young (6 to 8 weeks old).

Each vas, which is indicated by a piece of red glass rod, is normally connected with the testicle.

The bird was killed twenty-one months after the operation.

The vasa deferentia were filled with white secretion, which microscopically showed countless numbers of active spermatozoa.

The acquirement of the male characters was delayed, but these ultimately became fully pronounced.

*Presented by S. G. Shattock, Esq., and
C. G. Seligmann, Esq., 1904.*

99 c. Part of the trunk of a fully grown Fowl on which, when quite young (6 to 8 weeks old), castration was carried out, the operation being thought complete, but in which a reproduction of the organs has occurred from fragments unintentionally left behind.

The bird was killed eight months after the operation, and had then acquired the full external male characters.

On the left side the testicle is represented by a slightly bilobed oval mass 2·5 cm. in the chief, vertical diameter ; into the lower end of this the vas deferens is traceable ; beneath the lower end of the duct a piece of red glass has

been inserted. Below this mass, and closely adherent to the peritoneum, there is a minute graft not more than 3 mm. in its longer axis.

On the right side the testicle is represented by an almost globular mass of testicular tissue 4 cm. by 3·5 cm. in its chief diameters ; into the lowest part of this the vas is traceable, of full size, and filled with secretion.

The gland reproduced on the right side is larger than the normal fully grown testicle, but that on the left is correspondingly smaller, the whole amount of tissue reproduced not exceeding the volume of the two normal glands.

*Presented by S. G. Shattock, Esq., and
C. G. Seligmann, Esq., 1904.*

99 D. Portion of the trunk of a fully grown Fowl which had been castrated, but imperfectly, when from six to eight weeks old.

During the removal of the testicles (which at the time were quite small) the glands were ruptured ; from the minute fragments of tissue unintentionally left in the abdomen several grafts have grown.

On the left side in the original situation of the testis there is a spheroidal mass 2 cm. in diameter, into the lower end of which the vas deferens has been traced ; the duct is marked by a piece of red glass rod.

Hanging in the mid-line from a loose "mesorchium" is a spheroidal graft 1·5 cm. in diameter.

On the right side there is a bilobed mass 2·3 cm. in the chief, vertical diameter, with the lower end of which the right vas is directly connected ; closely adherent to the front of the upper lobe of this, yet slightly moveable over it, is a spheroidal graft 6 mm. in diameter. A further oval nodule 7 mm. in its longer axis is closely adherent to a coil of the small intestine in the neighbourhood of the liver ; a scraping of the recently divided surface of this showed large numbers of spermatozoa. Lastly, there is a graft of about the same dimensions intimately adherent to the under surface of the liver, the microscopic sections of which show typical pictures of active spermatogenesis,

considerable numbers of spermatozoa lying free, moreover, in the lumen of many of the large tubuli which compose the nodule.

The sum of the testicular tissue reproduced, however, does not exceed the volume of the two fully grown normal testicles, the grafts being not tumours properly so called, but scattered reproductions only of the lost parts.

(S. G. Shattock and C. G. Seligmann. Proc. Royal Society, vol. lxxiii. p. 49, and Trans. Path. Soc. vol. lvi.)

*Presented by S. G. Shattock, Esq., and
C. G. Seligmann, Esq., 1904.*

99 E. Part of the trunk of a fully grown Fowl, upon which, when about eight weeks old, double castration was carried out, the operation being thought complete.

The bird was killed seventeen months later, being then male in character: the comb and wattles were well developed, neck-hackles moderate, saddle-hackles fairly male, tail-feathers beginning to take the male curve, spurs of full length.

On the left side there is no trace of testicle in its normal position, but an inch and a half lower down, and three quarters of an inch anterior to this spot, there is an oval graft 2·5 cm. in chief diameter, loosely connected with the lateral wall of the abdomen. Above it, separated by a distance of 1·5 cm. and intimately incorporated with the peritoneum, is a second minute graft .5 cm. in chief diameter; and behind, or dorsally to this, is a further nodule 0·2 cm. in diameter, which is likewise inseparably adherent to the peritoneum; these two lesser grafts have been transfixed with black bristles. The vas deferens is extremely fine and traceable to the vacant, original site of the testicle.

On the right side, in the situation of the testis, there are two small flattened nodules, the larger, lower, of which is 0·8 cm. in chief, vertical diameter; into the lower end of this nodule the vas deferens, diminished in size and empty, is traceable: the duct has been marked by means of a red glass rod. A third nodule, which lay about 1 cm. anteriorly

to these, and slightly lower in the abdominal cavity, was removed for microscopic purposes ; scrapings from its recently divided surface disclosed the presence of spermatozoa.

Histologically the largest graft (that on the left side of the abdomen) shows closely applied tubuli of full size, every one of which presents the histological pictures typical of active spermatogenesis, the lumen of the tubuli containing, also, free spermatozoa.

(S. G. Shattock and C. G. Seligmann. Proc. Royal Society, vol. lxxiii. p. 49.)

Presented by S. G. Shattock, Esq., and C. G. Seligmann, Esq., 1904.

99 F. The head of the bird from which the preceding specimen was taken, showing a fully developed comb and wattles, together with well-formed neck-hackles.

(S. G. Shattock and C. G. Seligmann. Proc. Royal Society, vol. lxxiii. p. 49.)

Presented by S. G. Shattock, Esq., and C. G. Seligmann, Esq., 1904.

99 G. The legs of the same bird. Each bears a stout, pointed spur three-quarters of an inch in length.

(S. G. Shattock and C. G. Seligmann. Proc. Royal Society, vol. lxxiii. p. 49.)

Presented by S. G. Shattock, Esq., and C. G. Seligmann, Esq., 1904.

114 A. The conjoined opposite legs of two immature Fowls, the birds having been experimentally grafted together, one of the two having been first castrated and allowed to recover, the other being an intact cockerel of the same age and breed (Plymouth Rock).

The skin was incised along the thigh and leg of each bird (under an anæsthetic), and the femora exposed and wired together by means of silver wire ; the fibulæ were similarly secured together with silk-worm gut : deep sutures were passed through the muscles in such a way as to bring the divided faces of those of opposite limbs

together. The skin having been sutured, collodion was applied over the edges of the wound, and the two limbs secured with a bandage.

An incision has been made across the anterior aspect of the thighs so as to expose part of the wire suture around the femora.

The wound remained in excellent condition, and the birds themselves well, taking food readily; the comb of the capon, however, was noticed to be paler than that of the cockerel.

On the eighth day the capon died without obvious cause; the other bird was then killed by means of chloroform. No cause of death in the capon was found at the autopsy, and no trace of either testicle.

The object of the experiment (which was repeated unsuccessfully three times, one of the grafted birds dying in each case) was to see whether external male characters would develop in the castrated bird from the access of the blood of the intact male.

(S. G. Shattock and C. G. Seligmann. *Trans. Path. Soc.* vol. lvi.)

Presented by S. G. Shattock, Esq., and C. G. Seligmann, Esq., 1904.

248 b. A Bartholin's gland increased in size so as to measure an inch and a quarter in chief diameter, by the formation of a multilocular cyst at one part of its circumference. On the cyst-wall in places were recognizable the remains of a columnar-celled lining; the solid portion presents the typical histological structure of the normal gland, its tubuli and their subdivisions being lined with tall columnar epithelium; in the stroma, however, foci of lymphocytes occur.

The gland was excised from a woman who for a year had observed a swelling which had gradually increased in size.

Presented by E. Owen, Esq., 1904.

256 L. Half of a dermoid cyst about an inch and a quarter in chief diameter, which was removed from over the sternum.

The cyst has been inverted to display its epidermal lining. The contents consisted of a grumous material like curdled milk.

Histologically the wall was found to be provided with hair follicles and glands, both sebaceous and sudoriparous.

The cyst, which was readily dissected off, lay accurately over the position of the manubrium and body of the sternum ; there was no defect in the bone. The superjacent skin was thin but not adherent.

From a female child five years of age, in whom a small round swelling had been noticed from the time of birth ; this had increased until six months ago when it ceased to enlarge.

Presented by J. W. Thomson Walker, Esq., 1904.

365 b. A plaster cast of the skull of a man, æt. 34, affected with leontiasis ossea, and who died in 1857 under the care of Mr. E. R. Bickersteth, of Liverpool. The skull itself is fully described in the Pathological Society's Transactions, vol. xvii. p. 243, 1865, by Dr. Charles Murchison, and is now in the Museum of the Liverpool Royal Infirmary.

Besides the skull, the hyoid bone and the left fibula presented similar changes.

Presented by Dr. A. S. Grünbaum, 1904.

372 c. A lobulated spheroidal tumour about two and a quarter inches in diameter, which was removed from the orbit, together with the eye.

The tumour, which in no way involves the globe, appears to have arisen in the soft structures of the orbit, and is histologically a firm fibroma. Over its upper surface is spread out the superior rectus muscle which has been traced by dissection to its insertion on the globe.

From a female, who first noticed that her left eye was protruding, seven years ago, this being accompanied with some weakness of the upper lid. About two and a half years ago the protrusion was such that the lid never covered the eye, and sight soon afterwards became lost. The tumour continued to grow during the whole of the time, but was painless unless struck. There was no family history of new growth, and the patient herself had always been well.

During life the tumour produced a prominent swelling beneath the upper lid, and above the eye, which was displaced downwards and outwards as well as forwards.

[Mounted in 50 per cent. glycerine.]

Presented by C. Woakes, Esq., 1904.

456 c. A portion of skin taken about two inches below and to the right of the umbilicus, showing two slightly prominent pigmented tumours, the upper, larger of which measures about three quarters of an inch in its chief vertical diameter. Microscopically the main growth presents the structure of a melanotic carcinoma, without keratinisation or cell-nests.

From a girl twenty years of age, in whom there had been a "birth-mark" at the spot involved: the "mark" had grown during the last six months, owing, the patient thought, to the irritation due to the use of stays.

[Mounted in 50 per cent. glycerine.]

Presented by J. S. Himmel, Esq., 1904.

853 B. Portion of the parietal bone of a child in which there is a punctured fracture.

From a boy eight years of age, admitted to the Paddington Green Children's Hospital in a comatose condition.

There was a history of long standing otorrhœa following scarlet fever.

Four days before admission he received a blow on the head with a broken whip from which a steel core projected. Free haemorrhage ensued from a small scalp wound over the left parietal bone, but there were no immediate cerebral symptoms.

Two days later the child had a "fit," with twitching of the right side of the body. Meningitis, due to middle ear disease, was diagnosed before admission to the Hospital, where death shortly afterwards took place. After death a small punctured wound of the scalp was found, surrounded by a limited haematoma; beneath this the parietal bone was punctured, the track of the injury passing through the meninges and into the superficial part of the parietal lobe. There was no meningitis over the vertex, but early septic meningitis was found at the base, the inflammation extending backwards to the lower surface of the cerebellum.

The track of the spike reached for the depth of about an inch into the cerebral substance, and terminated in an area of softening

which involved the wall of the left lateral ventricle by the posterior cornu.

The left tympanic cavity contained a little yellow pus; but there was no trace of inflammation having involved the bone. The right tympanic cavity was normal.

Presented by J. W. Thomson Walker, Esq., 1904.

853 c. The calvaria of a boy thirteen years of age. In the anterior portion of the left parietal bone is the remains of a fracture which appears to have isolated a strip of the bone nearly three inches in length. At its lower end the injury is partly repaired by bone, but at the upper there is a somewhat irregular smoothly edged deficiency about an inch and a quarter in length through which a cephal-hydrocele projected.

The patient had received a blow on the head, the scalp being injured. The wound in the latter rapidly healed, but some months later a pulsating swelling appeared at the seat of injury. This presented all the characters of a fluid swelling communicating with the interior of the skull. Some years later the swelling diminished and finally disappeared. Death occurred from scarlet fever.

After death, a scar, about an inch long, was found at the site of the injury. Beneath the defect in the calvaria the dura mater was wanting, and there was evidence of old-standing injury to the cerebral substance.

Presented by J. W. Thomson Walker, Esq., 1904.

858 E. Portion of an occipital bone in which there is an irregular aperture to the left of and above the external occipital protuberance, about an inch and a half in extreme measurement, due to the removal of the fragments in a fracture.

From a man, æt. 28, who fell through a skylight. When seen he was collapsed and semi-conscious, and presented a compound, comminuted, and depressed fracture of the occipital bone; cerebral substance was oozing through a large irregular scalp wound in which pieces of bone and glass lay. The wound was freed of fragments and foreign material, cleaned and drained.

Death occurred from the effects of a fractured spine (seventh dorsal vertebra) on the eleventh day, with hæmaturia, abdominal distension, and uncontrollable vomiting. The hole in the occipital

bone was found at the autopsy completely filled in by membrane; there was considerable contusion of the left occipital lobe beneath the fracture.

(Case 50 in the list accompanying the Jacksonian Prize Essay of 1902.)

*Thomas Crisp English,
Jacksonian Prize Essay, 1902.
1904.*

877 c. The base of a skull showing a comminuted fracture in the left squamo-parietal region accompanied with laceration of the dura mater.

Fractures extend upwards to the vault and inwards across the base. The left tegmen is comminuted, and a fracture courses along the petro-squamous suture to the body of the sphenoid and into the cribriform plate. From the tegmen a wide fissure proceeds backwards across the petrous bone, externally to the internal auditory meatus, as far as the masto-occipital suture, and thence up to the vault along the lambdoid suture; the 7th and 8th nerves are torn across. The jugular foramen is also involved, the petrous bone external to that foramen being practically detached; the internal jugular vein was torn.

Both the lateral sinuses were lacerated at the spot where they bend inwards, the greater part of the dura lining the posterior fossa being stripped up by an extradural extravasation of blood from the sinuses and jugular vein. The subdural space was also filled with blood derived partly from the sinuses and partly from the extradural space through a rent in the dura mater in the left cerebellar fossa.

The dura mater overlying the tegmen tympani has been removed to display the comminution of the latter; the dura in the left temporal region is lacerated.

Pieces of blue glass have been passed through rents in the lateral sinus of each side, the injury on the left side corresponding with the course of the fracture, that on the right being unrelated to any fracture of the bone.

The dura mater lining the posterior fossa is almost completely detached, and was raised by extravasated extra-

dural blood, and is moreover torn over the situation of the left masto-occipital suture.

On the outer aspect of the skull are to be noticed comminution of the left glenoid fossa, a fracture through the left condyle, and wide sutural separation extending to the jugular foramen, where the vein was torn.

From a patient brought in dead to St. Bartholomew's Hospital. The specimen is from Case 40 in the Essay below referred to.

*Jacksonian Essay, 1902,
L. B. Rawling, Esq.
1904.*

877 d. The posterior part of the base of a skull, the dura mater being turned forwards so as to expose a fracture which involves the internal occipital protuberance. At the area of comminution, below and to the right of the protuberance, the inner table is more extensively fractured than the external. The dura mater was lacerated at this spot.

From the comminuted area one fracture passed along the right side of the internal occipital ridge to the posterior margin of the foramen magnum, a second fracture across the cerebellar fossa to the posterior margin of the jugular foramen, and a third for a short distance upwards to the vault.

The specimen is from Case 39 in the Essay below referred to.

*Jacksonian Essay, 1902,
L. B. Rawling, Esq.
1904.*

877 e. The brain from the foregoing case, showing laceration of both hemispheres of the cerebellum, especially of the right; laceration of the anterior parts of the frontal lobes, more particularly the right, and laceration, also, of the apex of the right temporo-sphenoidal lobe. The laceration is accompanied with extensive pial haemorrhage.

The specimen is from Case 39 in the Essay below referred to.

*Jacksonian Essay, 1902,
L. B. Rawling, Esq.
1904.*

877 F. The base of a skull showing an extensive comminuted fracture extending from the frontal region inwards across the base. The degree of separation in the left anterior fossa is particularly marked, the fracture passing along the left side of the body of the sphenoid, laying open the cavernous sinus, damaging the structures in relation with it, and partially rupturing the internal carotid artery. The injury in the last-named vessel is marked with a piece of red glass rod. The cribriform plate is detached, and from thence a fracture radiates to the right sphenoidal fissure, and is prolonged along the right side of the body of the sphenoid and through the petro-squamous suture. The left middle fossa is also extensively damaged, and there is some degree of separation in the course of the petro-occipital suture. The anterior and lower part of the left frontal lobe was lacerated.

From a man who fell down into a basement, and was found unconscious. He presented a compound depressed fracture of the frontal bone; orbital haemorrhage was present on both sides. Trephining was carried out, and fragments elevated. The dura mater was lacerated. He gradually became more collapsed, the right pupil widely dilating.

There was subconjunctival haemorrhage on the left side.

The specimen is from Case 11 in the Essay below referred to.

*Jacksonian Essay, 1902,
L. B. Rawling, Esq.
1904.*

877 G. The base of a skull showing a complete transverse fracture.

The fracture involves the left tympanic cavity, courses along the petro-squamous suture through the dorsum ephippii to the petro-squamous suture of the right side, and is afterwards continued upwards to the vault, passing in front of the right tympanum.

On the left side the fracture likewise reached the vault, traversing the petro-occipital and lambdoid sutures from the outer margin of the jugular foramen.

Both the internal carotid arteries have been torn across in their course along the cavernous sinus; pieces of red glass have been inserted into the torn vessels.

The tegmen of the tympanum has been removed on the left side to exhibit the undisturbed condition of the ossicles, and to show that the fracture passes in front of the genu of the facial nerve, beneath which a bristle has been passed.

The tensor tympani muscle and petrosal nerves are torn but the Eustachian tube appears to be intact.

In the recent state there was marked separation of the two basal fragments.

From a patient who was run over by a cart, the skull having been probably compressed between the wheel and road. Blood at once poured from the mouth and nose in a fountain.

There was proptosis of both eyes; pupils fixed and moderately dilated. Death occurred shortly after the accident.

The specimen is from Case 20 in the Essay below referred to.

*Jacksonian Essay, 1902,
L. B. Rawling, Esq.
1904.*

877 H. Portion of the base of a skull posterior to a fracture which divided the base in two. From either end of the line of division shown, a fracture extended up to the vault.

On the right side an additional fracture passes through the roof of the external auditory meatus and middle ear along the petro-sphenoidal suture to the body of the sphenoid bone.

The roof of the right tympanum has been removed to show that the ossicles are uninjured; the membrana tympani is torn at its upper part where crossed by the fracture of the external auditory meatus.

The genu of the right facial nerve is uninjured.

On the left side the floor of the left sigmoid sinus is comminuted.

From a patient who fell down a well, 20 feet, and probably struck the right side of the head. There was recent blood in the right external auditory meatus, the patient being brought into St. Bartholomew's Hospital, dead.

Both the frontal lobes were lacerated.

The specimen is from Case 22 in the Essay below referred to.

*Jacksonian Essay, 1902,
L. B. Rawling, Esq.
1904.*

877 i. Portion of the base of a skull posterior to a fracture which has divided the base in two.

The line of fracture passes through the middle ear of the left side and along the petro-squamous suture to the body of the sphenoid, which was comminuted ; the dorsum ephippii was involved and the left sixth nerve torn across. Thence the fracture on the right side of the mid line is traceable backwards along the petro-squamous suture, across the right middle ear to the external auditory meatus. The two parts of the base were moveable, one on the other. Both facial nerves escaped injury, though the genu of the right lay exposed. The petrosal nerves were lacerated, and both the tympanic membranes were ruptured.

In the plane of fracture the following structures are to be recognized :—Starting on the right side, the external meatus, middle ear and mastoid antrum, the genu of the facial nerve (marked by a bristle), the tensor tympani muscle, processus cochleariformis, and Eustachian tube ; above the tensor tympani is the horizontal part of the internal carotid artery ; in the mid line, the sphenoidal sinus and naso-pharynx below : on the left side (where the fracture passes in a slightly more anterior plane) the facial nerve is not exposed, but with this exception the objects correspond to those already enumerated.

The right temporo-sphenoidal convolution was lacerated, and there was extensive pial haemorrhage.

From a man, aet. 29, who fell down a hold, 20 feet, and who was admitted into St. Bartholomew's Hospital in an unconscious condition, with bleeding from both ears, nose, and mouth. There were no symptoms of compression, and the patient could swallow until a few hours before death. He was able to recognize his friends four hours later, but subsequently became comatose and died.

There was ptosis of the left eye, with downward and inward strabismus ; no facial palsy.

The brain showed general pial haemorrhage and laceration of the right temporo-sphenoidal convolution.

The specimen is from Case 2 in the Essay below referred to.

Jacksonian Essay, 1902,

L. B. Rawling, Esq.

1904.

877 k. The base of a skull from a case in which there was an extensive comminuted fracture involving the left parieto-occipital region, from which area three fractures extended to the base. One of these passed forwards through the outer wall of the left middle fossa, externally to the auditory region. A second fracture passed forwards across the left cerebellar fossa, reaching the foramen magnum behind the condyle. A third fracture (following the direction of the second) appears on the right border of the foramen magnum, behind the right condyle, and passes to the outer part of the jugular foramen, across the petrous bone, externally to the internal auditory meatus, and was accompanied with laceration of the seventh and eighth nerves. On reaching the petro-sphenoidal suture the fracture follows that suture inwards, and is met at the apex of the petrous bone by a fracture passing from the front of the jugular foramen along the petro-occipital suture. The inner half of the petrous bone was detached and loose, the internal ear being practically parted in two, and the middle ear opened.

From a man, *aet.* 41, who fell down some steps and struck his head. He was unconscious and collapsed; pupils small and equal; no haemorrhages; some rigidity of the right arm, and convulsive movements after examination; right leg flexed. After trephining, the bulging dura mater was incised, some blood-stained serum escaping; there was a certain amount of extradural haemorrhage.

No improvement followed.

The brain was lacerated at the site of the main fracture, and on the under aspect of the right frontal and temporo-sphenoidal convolutions.

The specimen is from Case 16 in the *Essay* below referred to.

Jacksonian Essay, 1902,
L. B. Rawling, Esq.
1904.

877 l. Portion of a right temporal bone, of which the petrous is detached by a fracture which passes forwards from the outer part of the jugular foramen externally to the internal auditory meatus. The seventh nerve was torn across near its genu. Both the middle and the internal ear are implicated. The course of the fracture is marked by a red line which has been painted on the bone.

From a case brought in dead. There was a comminuted fracture of the right fronto-parietal region, from which fractures passed up over the vault and inwards across the base. The right frontal lobe was lacerated.

The specimen is from Case 21 in the Essay below referred to.

*Jacksonian Essay, 1902,
L. B. Rawling, Esq.
1904.*

877 M. The lower part of a skull. From the region of the right external auditory meatus a fracture passes upwards to the vault (where it reached the sagittal suture), and a second inwards to the base. The last-mentioned fracture involves the roof of the external meatus, the roof of the middle ear, and thence passes forwards along the right petro-sphenoidal suture to the body of the sphenoid which is comminuted ; from the roof of the meatus a branch of the main fracture is traceable backwards through the outer part of the body of the petrous bone, obliquely across the lateral sinus, and thence to the foramen magnum posteriorly to the condyle.

The posterior branch of the middle meningeal artery was torn, blood escaping through the gaps in the tegmen into the middle and external ears.

The bleeding from the right ear was profuse and lasted till death.

The brain presented cortical haemorrhages on the right temporal and left frontal lobes. On the right side there was some slight extradural haemorrhage.

From a man, who was struck on the head by a log of wood, and rendered unconscious. The pupils were equal and irresponsible ; right membrana tympani torn at its upper part ; bleeding from the right ear and nose, lasting till death, which occurred on the same day.

The specimen is from Case 12 in the Essay below referred to.

*Jacksonian Essay, 1902,
L. B. Rawling, Esq.
1904.*

877 N. The base of the skull of a man who committed suicide by firing through the roof of his mouth, death being almost

instantaneous. The bullet has been split in two by the vaginal process; one fragment, lying behind the condyle of the jaw, has fractured the floor of the external and middle ears, which were full of blood. The other fragment rests in the anterior part of the jugular foramen, and had lacerated the jugular vein; the tissues around were full of blood.

On the inner aspect it will be seen that the chief part of the petrous bone is nearly detached, (a) by a fracture which passes along the petro-sphenoidal suture, (b) by separation along the petro-occipital suture, and (c) by a fracture running between these across the outer part of the tegmen, and thence obliquely inwards above the level of the sigmoid sinus to the outer margin of the jugular foramen.

The specimen is from Case 34 in the Essay below referred to.

*Jacksonian Essay, 1902,
L. B. Rawling, Esq.
1904.*

877 o. The base of the skull of a woman who died two months after sustaining a fracture of the base.

The fracture, as viewed from the inner aspect, has a triradiate form, one arm of which passes forwards from the external auditory meatus through the tegmen tympani and petro-squamous suture; a second arm passes upwards and forwards through the squamous portion of the temporal bone; and the third backwards to meet the lambdoid suture, part of which is opened up. Here and there the fissures in the temporal bone are filled in with new bone.

From a woman, æt. 55, with alcoholic history, who fell fifteen feet, striking the head in the left mastoid region.

There was free haemorrhage from the left ear. She recovered her senses more or less completely after two or three weeks. Speech was rambling and incoherent. Paraplegia was noticed a month after the accident. Bedsores, incontinence of urine and faeces, progressive weakness and gradual loss of consciousness led to death two months after the date of the injury.

The specimen is from Case 38 in the Essay below referred to.

*Jacksonian Essay, 1902,
L. B. Rawling, Esq.
1904.*

877 P. The anterior part of the skull of a man who in a fit of suicidal mania took his life by repeatedly striking himself on the head with a dumbbell. Having produced a comminuted fracture, he tore at the wound and removed several fragments, then became unconscious, and died before being admitted to the hospital.

In the middle line behind the coronal suture there is a circular gap about two inches in diameter; on the left side of this the external table is concentrically fissured.

The dura mater was lacerated and the brain contused.

The injury on the inner aspect is more extensive than on the outer.

877 Q. Fragments of bone from the preceding case, which were found tightly grasped in the hand of the deceased.

The specimen is from Case 33 in the Essay below referred to.

*Jacksonian Essay, 1902,
L. B. Rawling, Esq.
1904.*

877 R. The skull of a man who committed suicide by firing a pistol across his head, death occurring almost at once.

The aperture of entry is in the right temporal region in the anterior inferior angle of the parietal bone. The bullet has failed to perforate the opposite side of the skull, and a portion is tightly wedged in a fissured, radiating fracture of the left parietal bone.

The vault of the skull has been almost completely detached by the "explosive force" within, the only connecting portion of bone being that on the right side between the apex of the occipital squama and the lowest inch of the occipito-parietal suture. On each side the fracture descends to the base of the temporal region, whilst exteriorly it courses almost horizontally about an inch above the supra-orbital margin. On the left side a short secondary fissure extends to the roof of the external auditory meatus and for about an inch across the middle fossa.

877 s. The anterior portion of the right cerebral hemisphere from the preceding case, showing the ragged path of the bullet through the frontal lobe into the lateral ventricle ; the corpus callosum is torn through.

There was but little extravasation of blood.

The specimen is from Case 14 in the Essay below referred to.

Jacksonian Essay, 1902,

L. B. Rawling, Esq.

1904.

877 t. The anterior half of the base of a skull, the dura mater being turned back to expose a fracture involving the cribriform plate of the ethmoid. Over the right half of the plate the membrane was torn, and through this spot infection took place from the bone, basal meningitis resulting on the seventh day.

The two fractures in the region of the supraorbital ridges extended for a short distance upwards on the vault ; inferiorly they converge towards the cribriform plate which is comminuted. A probe could be readily passed through the right half of the fractured plate into the nose. Over the plate lay broken-down blood-clot, cerebral tissue, and pus. The left occipital lobe was lacerated together with the lower surface of the right frontal.

From a patient who was knocked down by a cart, and brought in unconscious ; pupils dilated, equal ; abrasion of forehead on right side ; ecchymosis of right eyelids ; epistaxis. The patient regained consciousness, and vomited, and improved till the seventh day. There then set in vomiting and rigors ; unconsciousness, twitchings of the right arm and leg ; proptosis of the left eye. The pupils were equal, and reacted to light. Before death, which occurred on the ninth day, the twitchings became more marked, and the right pupil dilated.

The specimen is from Case 10 in the Essay below referred to.

Jacksonian Essay, 1902,

L. B. Rawling, Esq.

1904.

2115 E. A longitudinal section of portion of a spinal column from the dorsal region.

The body of one of the vertebrae, though presenting in

the macerated specimen an approximately normal construction, has been to a large extent removed, and more so in front than behind, the spine having in consequence bent forwards with the production of an angular curvature. The bone is from the same case as that from which the humerus shown in No. A 1634 was obtained—a case of myelomatosis.

From a man admitted into the German Hospital, May 1900, and affected with albumosuria. Early in 1900, tingling and loss of power were noticed in both hands, and he began to suffer from pain in the loins. In May, his back commenced to bend. By December 1900, the patient had become very weak; no anaesthesia was detected. Severe haemorrhage from the bowel occurred Jan. 24th, 1901, the patient dying on the following day.

After death the skeleton was found to be extensively diseased, the osseous tissue being the seat of new growth like that shown in the humerus preserved.

For a full account of the case, see Royal Medical and Chirurgical Soc. Trans. vol. lxxxvi. "A case of multiple myeloma (myelomatosis) with Bence-Jones proteid in the urine."

[Mounted in 50 per cent. glycerine.]

Presented by Dr. F. Parkes Weber, 1904.

2336 B. A hair-pin which was removed by operation from the abdominal cavity.

From a young married lady who arrived in London from America suffering from peritonitis originating apparently in the pelvis. She had never been pregnant and her periods had always been regular and normal. Her illness came on whilst crossing from New York. A year previously the abdomen had been opened in New York and the uterus fixed forward; from this operation she made an uninterrupted recovery. At the second operation diffuse suppurative peritonitis was found, accompanied with many adhesions.

Lying obliquely across the pelvis was a *straightened out* hair-pin of which neither end was embedded in the soft tissues. The patient died. No clue was obtained as to how the foreign body reached the abdominal cavity; there was no history of its having been swallowed; and the patient had never thought herself pregnant.

Presented by A. P. Gould, Esq., 1904.

A 2398 A. The pyloric portion of the stomach of an infant three months old. At the site of the pyloric canal, the muscular wall is notably hypertrophied, the hypertrophy involving

mainly the circular layer. On the distal side the thickening ends abruptly ; on the proximal its disappearance is less sharply defined. The mucous membrane within the constricted part (which measures about three quarters of an inch in length) is thrown into a single prominent longitudinal fold, portion of which is prolonged for a short distance into the cavity of the stomach.

From a child eleven weeks old, attending as an out-patient at the Belgrade Hospital for Children in April 1897. The child was apparently healthy at the time of birth, and up to the age of five weeks ; after that date rapid wasting set in. Vomiting appeared to have begun at the age of three months, and was persistent. The patient was admitted into the hospital on May 3rd, 1897. Every kind of food was vomited at varying intervals. The bowels acted at times without the aid of medicine, the stools being small, and often greenish. The temperature became subnormal, and death took place from exhaustion on May 12th. After death, the stomach was found much dilated, and on firmly pressing the contents towards the pylorus, a small quantity could be forced through into the duodenum. A small amount of food was found in the intestine. The contents of the stomach consisted of partially digested food and mucus. The pyloric orifice would only allow of the passage of a probe.

(E. Cautley. *Medico-Chir. Trans.* vol. lxxxii. "Congenital hypertrophic stenosis of the pylorus," Case 19.)

Presented by Clinton T. Dent, Esq., 1904.

2667 A. The right ovary with the Fallopian tube of a child nine weeks old, which were strangulated in a right inguinal hernia, and successfully removed by operation. The ovary is much enlarged (so as to measure one and a half inches in its longer axis) and of a deep plum-colour from congestion and interstitial haemorrhage. The mucosa of the tube shows similar changes.

A swelling in the groin had been present for ten days : there was no fever, and little sickness. The vessels in the broad ligament were found to be completely occluded by thrombosis at the time of the operation.

[Mounted in 50 per cent. glycerine.]

Presented by E. M. Corner, Esq., 1904.

2739 B. A slice from the liver of a patient affected with pernicious anaemia. The section has been treated with a

solution of ferrocyanide of potassium, and subsequently with dilute hydrochloric acid, to show the presence of iron in the tissue by the formation of ferrocyanide of iron (Prussian blue). *Presented by St. Thomas's Hospital, 1904.*

2834 c. A group of calculi removed by operation. Four of them, mounted at the corners, are spherical, tuberculated, about a quarter of an inch in diameter, and are biliary. The rest, of which the largest is three quarters of an inch in its chief axis, are pancreatic.

From a lady æt. 57, operated upon Feb. 1903 by the donor of the specimen. Of the pancreatic calculi one was removed from the duct of Santorini (or one of its tributaries) by direct incision into the pancreas close to the common duct, the opening being afterwards closed by deep and by peritoneal sutures; two of the pancreatic calculi were reached through an incision in the duodenum by laying open the papilla, when by means of fine forceps a further calculus was extracted from Wirsung's duct, along which a probe was afterwards passed for two inches; a fourth calculus was removed, by direct incision into the pancreas, from the middle of the duct of Wirsung, the stone being reached by dividing the gastro-hepatic omentum, drawing the stomach downwards, incising the pancreas freely and opening the duct directly over the concretion: the duct was then closed with cat-gut, the wound in the body of the pancreas sutured, and the peritoneal wounds closed without direct drainage. The right kidney pouch was then drained as some infected bile had escaped. Recovery was ultimately complete.

Pain and vomiting were marked features in the case before operation.

A skiagram of the calculi preserved gave a marked shadow of the pancreatic but only a faint one of the biliary.

(A. W. Mayo Robson. Hunterian Lectures, Lancet, April 2nd, 1904.)

Presented by A. W. Mayo Robson, Esq., 1904.

2908 b f. A transverse section of a goitrous thyroid in which a carcinoma has grown, the malignant disease being distinguishable by its greater opacity. The trachea is laterally flattened and displaced to one side by the neoplasm. Histologically, the carcinoma consists of closely-set columns of cells which in process of growth acquire a lumen and come to resemble the proper thyroid tissue.

The calvaria, which was perforated by a metastatic growth, is preserved as specimen No. 3864 b.

From a woman æt. 42, admitted March 1903 into the Cumberland Infirmary on account of a tumour over the left frontal region, which had been incised under the belief that it was a sebaceous cyst.

The tumour was first noticed twelve months previously when it was the size of a nut, and gradually enlarged, though the increase had been rapid during the six weeks prior to admission. Headaches, vertigo, and occasional vomiting were experienced before the tumour appeared, but not afterwards.

The tumour occupied the left frontal region one and a half inches above the centre of the left supra-orbital ridge, and was as large as half an orange. There was also a bilateral goitre of moderate size which was not causing any dyspnœa. The neck had been "thick" for years.

On dealing with the cranial growth it was found to spring from the bone, and a large perforation with irregular edge existed at its base. Much haemorrhage arising, the growth was rapidly removed below the level of the skull and the edges of the perforation trimmed with bone forceps.

Owing to its pulsation, the tumour was thought to be connected with the subjacent brain, but this did not prove to be the case. For a week it seemed not impossible that recovery would take place, but a run of high temperature was then noted, and death occurred seventeen days after admission. Permission for a complete examination was not obtained.

(H. A. Lediard, *Trans. Path. Soc.* vol. lv.)

[Mounted in 50 per cent. glycerine.]

Presented by Dr. H. A. Lediard, 1904.

2928 A. Portion of the left ventricle of the heart of an adult. In the substance of the myocardium at the apex of the ventricle there has formed an extensive plaque of dense fibrous tissue about two inches in diameter, in which calcification has occurred.

Very little deformity has ensued beyond a slight aneurysmal bulging of the affected area.

The epicardium has been dissected off from the outer surface of the calcified plate which extends for a short distance into the interventricular septum. In the different divided surfaces of the ventricular wall, there is displayed a large amount of dense fibrous tissue, and in this, in certain small spots, calcification had taken place. Some of the columnæ carneæ were entirely converted into dense, almost tendinous tissue. In the epicardial fat are shown the sections of one or two calcified and obliterated arteries.

Histologically there are no signs of present inflammation in the fibrosed areas, and no caseation.

From a man æt. 73, who during the last few years had grown indolent in disposition, but who for the past ten years had never had any illness or pain. On the afternoon of his death he was sitting on the pier at Worthing and got somewhat chilled. He walked home, a distance of about 1000 yards, on reaching which he sat down in a chair without complaining of feeling ill. A minute later a friend with him hearing a gasping noise looked up and saw the deceased's hands fall by his side, death occurring almost immediately. At the autopsy nothing abnormal was found beyond the condition shown in the heart: the lungs were slightly emphysematous. The aortic valve was proved to be competent as tested by pouring water upon it; the donor observed also that some of the chordæ tendineæ of the mitral valve had ruptured, the columnæ carneæ projecting through the auriculo-ventricular aperture into the auricle.

A small clot lay on the calcified surface within the ventricle.
[Mounted in 50 per cent. glycerine.]

Presented by F. Parish, Esq., 1904.

3638 M. A somewhat branched calculus about two and a half inches in its longer diameter, which was successfully removed together with the small oval concretion mounted with it, from the left kidney.

The calculus was removed in March 1899 from the patient whose case is detailed under specimen No. 3638 I, in whom a stone had been taken from the same kidney in Dec. 1896.

Presented by W. F. Brook, Esq., 1904.

3638 N. A collection of articulated calculi, the largest about one and a half inches in diameter, which were successfully removed in July 1900 from the right kidney of the preceding patient, a calculus having been taken out from the same kidney in Jan. 1898.

From the patient whose case is detailed under specimen No. 3638 I.

Presented by W. F. Brook, Esq., 1904.

A 3584 c. A right kidney, in connection with the outer border of which there is a large spherical cyst, about four and a half inches in diameter, which is covered with an extension of the proper capsule of the organ.

At the base of, and projecting into the cyst, but separated by a thin line of connective tissue from the renal substance, is a layer of lobulated material about a third of inch in thickness, much of which is yellow and necrosed. Microscopic examination of the projecting growth shows it to be a papilliferous adenoma.

The organ was removed by abdominal excision, April 1903, from a patient in whom a mobile kidney had been diagnosed seven years previously. With the exception of occasional aching pain no serious inconvenience was felt in connection with the kidney until Jan. 1903, when the patient received a blow on the right loin from the corner of a heavy box. This was followed by severe pain and by a rather rapid increase in size of the swelling, which remained extremely sensitive to pressure, and painful on exertion of any kind. There was no rise of temperature and a complete absence of urinary symptoms.

The cyst held nearly three-quarters of a pint of dark blood-stained fluid mixed with cholesterin.

[Mounted in 50 per cent. glycerine.]

Presented by W. A. Meredith, Esq., 1904.

A 3584 D. Half of a large cystic tumour about eight inches in its longer, vertical diameter, together with portion of the kidney in connection with which it has grown.

The lower part of the kidney is traceable for a short distance over the upper end of the tumour ; beyond this, the renal capsule furnishes an investment to the growth, which is itself sharply demarcated from the substance of the kidney by a thin line of connective tissue.

The tumour is composed of close-set cysts of varying sizes, the largest being about two and a half inches in diameter, the smallest microscopic. Into the tissue between the cysts an abundant extravasation of blood has taken place, but none has reached the larger cysts, which are filled with a semitransparent material coagulated by the formol used in the preparation of the specimen.

Histologically, the relatively small amount of tissue between the cysts is of a richly celled connective kind, abundantly infiltrated with blood, the number of polymorphonuclear leucocytes in which greatly exceeds that which would be due to the proportion of blood extravasated. The cystic condition is universal and extends into the most

solid-looking portions ; blood has escaped into some of the smaller cysts.

The tumour may be regarded as a localised cystic adenoma of unusual size, into the stroma of which haemorrhage has taken place.

From a boy, æt. 13, admitted into the Westminster Hospital, Feb. 1902, under the care of Mr. W. G. Spencer.

A swelling had first been noticed by his mother in the summer of 1901, but she stated that he had always had a "big stomach" as a child. The patient had occasionally complained of acute pain across the abdomen, but in other ways was healthy and well-nourished.

When admitted to the hospital in Feb. 1902, the abdominal enlargement was chiefly anterior, and slightly greater on the left side than on the right ; the enlargement of the abdomen was most pronounced above the umbilicus. The upper limit of the tumour descended on deep inspiration. On palpation the whole of the left side of the abdomen was found occupied by a firm mass which appeared to spring from the left side ; percussion note dull, except towards its margin where overlapped by intestine.

The tumour was removed without difficulty through an incision carried through the anterior and lateral wall of the abdomen. In Feb. 1904, the boy was reported to be in good health.

[Mounted in 50 per cent. glycerine.]

Presented by the Westminster Hospital, 1904.

3752 A. The left hemisphere of a brain from a case in which the skull was extensively fractured in a fall from a height.

Over the Rolandic area there is a widespread pial haemorrhage. The antero-external part of the temporo-sphenoidal lobe is lacerated and encrusted with extravasated blood.

From a man, æt. 50, who fell into a dry dock, striking the right side of the head.

There was a lacerated wound in the right parietal region : tonic convulsions of all the limbs, especially marked on the left side, were noted ; blood was vomited several times. Ten hours after the accident there was proptosis of the right eye accompanied with palpebral ecchymosis : profuse sweating. Death occurred on the second day.

The specimen is from Case 5 in the Essay below referred to.

*Jacksonian Essay, 1902,
L. B. Rawling, Esq.
1904.*

3752 b. The anterior portion of the left frontal lobe from a case in which the skull was fractured on the right side by a fall from a height.

The lobe is contused and lacerated on the anterior, inferior, and external aspects, the central portion of the injured area being more damaged than that around. The local injury is accompanied with surrounding pial extravasation.

From a man who jumped from a second-floor window.

He was unconscious on admission, but very irritable, resisting all attempts at examination. The pupils were equal and reacted. There was a lacerated wound two inches above the occiput. No external haemorrhages; no paralysis. Death occurred in seven hours.

The specimen is from Case 4 in the Essay below referred to.

*Jacksonian Essay, 1902,
L. B. Rawling, Esq.
1904.*

3752 c. Portion of the right hemisphere of a brain cut so as to expose the three cornua of the lateral ventricle, together with the third and fourth ventricles. All the spaces named are full of blood.

The brain and dura mater were lacerated at the site of a fracture of the vault in the left parieto-occipital region. There was laceration, in addition, of the inferior surface of the right frontal lobe, the interior of which was the seat of extensive extravasation: the right parietal lobe was contused.

From a man, *aet. 56*, who fell backwards out of a lift.

He was semiconscious and able to walk with assistance. Pupils equal and reacting; speech incoherent; haematoma in the left parietal region, which increased and involved the eye. The patient became unconscious; general convulsions occurred at intervals. Death took place on the third day.

The specimen is from Case 18 in the Essay below referred to.

*Jacksonian Essay, 1902,
L. B. Rawling, Esq.
1904.*

3782 c. Portion of the right hemisphere of a brain, the preparation being mounted so that the median, flatter surface

lies undermost. The section displays an extensive, somewhat wedge-shaped, mass of dilated vessels, which appear also externally, where they form a close plexus in the meninges.

C. A---, male, a clerk, *aet.* 17, was admitted to St. Bartholomew's Hospital on October 4th, 1902. He was in his usual health on the day of October 2nd. During the night he was seized with abdominal pain, and shortly afterwards became drowsy.

On admission thirty-six hours later he was in a stuporose condition, but could be roused to answer questions. There was a foul discharge from the left ear. Some weakness of the muscles of the left side of the face and diminished movement of the left arm and leg were noticed. The knee-jerk on that side was more active than on the right. There was no optic neuritis.

On 5th and 6th he vomited several times. On October 6th signs of pneumonia appeared at the base of the right lung. On the 7th he vomited a very large quantity of brownish fluid, and died on the 8th October, having remained in the same stuporose condition throughout.

Previous history.—Four years previously the patient had had a fall on the head. He was unconscious for five or six hours, and confined to bed for five months. Some weakness of the left side remained after the accident, and for the last three years of his life he had been subject to epileptic fits.

At the *post-mortem* examination the lower lobe of the right lung was found to be completely solid, and there was commencing consolidation in the upper and middle lobes of the same side and of the lower lobe on the opposite.

The stomach was enormously distended, the cardiac end reaching as high as the fourth rib on the left side: the remainder of the organ occupied the whole of the front of the abdominal cavity, its lower margin reaching to within an inch or so of the symphysis pubis. The distension extended for some inches past the pylorus along the duodenum, and ceased abruptly without obvious cause. The remaining portions of the gut were collapsed, and lay partly behind the stomach and partly in the pelvis. The stomach contained a very large quantity of yellow pea-soup-like fluid, which was not frothy.

The scalp, the cranial bones, and dura mater were all healthy, as were, also, the various sinuses.

On removing the dura mater from the vertex the whole surface of the brain so exposed appeared exceedingly congested. Though this appearance, on removal of the brain, was found to be general over the whole surface, the condition was much more marked on the right side, particularly over the superior parietal and ascending parietal convolutions externally, and over the *præcuneus* and paracentral convolutions on the median surface. Over this area the vessels, which at the time of the autopsy were

regarded as veins, were enormously dilated and tortuous, forming an almost unbroken surface of spongy, blood-containing tissue.

On making, after hardening, a transverse section of the hemisphere at this spot, it was found that the process penetrated in wedge-shaped form deeply into the white matter, and terminated abruptly in a single round dilatation as large as a cherry, which occupied the situation of the lenticular nucleus without obviously encroaching on either the internal or external capsule.

The middle cerebral artery on that side was of normal size at its origin, but on entering the Sylvian fissure became greatly and irregularly dilated, and, following its usual course and distribution, acted as the feeder from this side, of the mass of enlarged vessels seen on the vertex.

Similarly, branches of the anterior cerebral vessels supplied the mass on the median aspect of the brain.

The arteries of the circle of Willis were of ordinary size, but the cortical branches were everywhere enlarged, the disease not being strictly circumscribed, though much more marked at the spot indicated.

(Dr. J. H. Drysdale. *Trans. Path. Soc.* vol. lv.)

[Mounted in 50 per cent. glycerine.]

Presented by St. Bartholomew's Hospital, 1904.

3864 A. Portion of dura mater corresponding with the left frontal region of the calvaria preserved as the succeeding specimen. Involving its outer surface is a discoidal new growth of secondary carcinoma, which lay within the defect shown in the bone ; the growth represents the deepest portion of a tumour which projected through the skull, and the chief part of which was removed during life.

(H. A. Lediard. *Trans. Path. Soc.* vol. lv.)

Presented by Dr. H. A. Lediard, 1904.

3864 B. The calvaria of the preceding patient, who was the subject of carcinoma of the thyroid, the latter specimen being preserved as No. 2908 b.f. In the left frontal region there is an irregularly circular hole about two inches in diameter, due to the destruction of the bone by a metastatic growth. On the inner aspect an annular formation of new osseous tissue has been produced around the margin of the defect ; this is wanting posteriorly, where the growth

appears to have extended between the dura mater and the bone, the surface of the latter being eroded.

From a woman, aet. 42, admitted, March 1903, into the Cumberland Infirmary, on account of a tumour over the left frontal region, which had been incised under the belief that it was a sebaceous cyst. The tumour was first noticed twelve months previously, when it was the size of a nut, and gradually enlarged; but the increase had been rapid during the six weeks prior to admission. Headaches, vertigo, and occasional vomiting were experienced before the swelling appeared, but not afterwards. The tumour occupied the left frontal region one and a half inches above the centre of the left supra-orbital ridge, and was the size of half an orange. There was also present a moderately-sized bilateral goitre, which was not causing any dyspnœa. The neck had been "thick" for years.

On dealing with the cranial growth, it was found to spring from the bone, and a large perforation with irregular edge existed at the base of the tumour. Much haemorrhage arising, the growth was rapidly removed below the level of the skull, and the edges of the perforation trimmed with bone forceps. Owing to its pulsation the tumour was thought to be connected with the subjacent brain, but this did not prove to be the case.

For a week it seemed not impossible that recovery would take place, but a run of high temperature was then noted, and death occurred seventeen days after admission.

(H. A. Lediard. *Trans. Path. Soc. vol. lv.*)

Presented by Dr. H. A. Lediard, 1904.

3925 A. Portions of certain of the cranial nerves of an Angler fish, in connection with which clusters of the parasitic cysts of *Glugea lophii* have formed.

(Doflein, F. *Studien zur Naturgeschichte der Protozoen, III. Ueber Myxosporidien, Zool. Jahrb., Abth. f. Anat. xi. pp. 281-350, pls. 18-24, 1898.*)

Stores, 1904.

A 3926 A. A flattened, irregularly oval Rhinolith about an inch in chief diameter, formed upon a pearl button which has been exposed by fracture of the calculus.

The foreign body had been put up the nose in the year 1815, and, with the deposit formed upon it, was pushed back with a penholder into the pharynx sixty-three years afterwards.

Presented by V. G. Webb, Esq., 1904.

4053 A. Two concretions which were removed from the umbilicus. They measure about half an inch in diameter, and have a rugged irregular surface. Microscopically they consist of aggregated epithelial cells and hairs which have been shed into the umbilical depression. Above, are mounted two small scales which were found detached from them. In the interior of the smaller some fragments of woody tissue were found.

From a male, *aet. 46*, a Serjeant-Major of Dragoons. In the first week of July, 1902, he was troubled with a slight purulent discharge from the umbilicus, around which the skin for about a quarter of an inch was eczematous. About ten days later, in lifting a cask, he seems to have strained himself and to have hurt his left side; and some while afterwards, on presenting himself a second time, he exhibited a good deal of tenderness and muscular rigidity in the left iliac region. Rest and hot fomentations were ordered. In a few days it became evident that an abscess was forming in the abdominal wall, which was draining through the umbilicus, the discharge being most offensive. The patient became very ill, rapidly losing flesh. On July 26th two incisions were made into the abscess, which now reached from the umbilicus to Poupart's ligament on the left side, one incision being made just to the left of the umbilicus and the other immediately outside the left linea semilunaris. A large quantity of offensive pus was evacuated. The abscess cavity was found to extend as far as Poupart's ligament on the left side. At the bottom of the cavity, on the deep side of the rectus muscle, there were found the concretions shown in the preparation.

The wounds had healed by the end of August, and the patient was much improved in health.

Presented by J. R. Harper, Esq., 1904.

4103 E. A Goldfinch of which the beak is abnormally long. Below the beak is mounted a portion which was shed, the shedding of similar portions taking place annually, as occurs normally, *e. g.*, in the Puffin.

Presented by W. B. Tegetmeier, Esq., 1904.

4110 B. The hinder part of a Pigeon. On either side of the pygostyle there is a prominent lobulated eminence from which there project the ends of several young feathers. On the right side a section has been carried through the mass. The plane of division crosses two such young

feathers, around the lower of which is an accumulation of horn-like, translucent, amber-coloured material which has distended the follicle into a cyst. Histologically the material consists of delicate flattened epithelial cells arranged in compact laminæ, like that which fills a follicular cyst in the human subject.

Presented by C. G. Seligmann, Esq., 1904.

4225 b. The testicle of a boy enlarged so as to measure two and a quarter inches in its chief diameter, by the growth of a dermoid cyst or cystic teratoma. Projecting into the cyst is an irregularly lobulated process about an inch and a half in its longer axis, from one pole of which there protrudes the crown of a multicuspidate tooth. Over one area the surface of the process is coarsely papillary, and bears a certain number of black hairs.

At the upper part of the section the tunica albuginea is traceable for some distance over the wall of the cyst; and at the back of the preparation the tunica vaginalis has been reflected so as to expose a flattened body, which Mr. Shattock found on microscopic examination to be the epididymis: an examination of the wall of the cyst in two different situations further revealed the presence of a thin layer of well-developed testicular tubuli lying beyond the dense fibrous tissue composing the chief thickness of the cyst-wall. The interior of the cyst is lined with granulation-tissue.

From a blind boy, sixteen years of age. There was a history of the enlargement having been congenital. He had suffered from frequent inflammatory attacks of the scrotum following injury, such as crushes against a stool, etc. At the operation the right testicle was found to be small, but normal in position.

The skin over the front of the left testicle was reddened, and a sinus was present at the junction of the scrotum and penis. The left testicle appeared as an elastic globular mass, no distinction being possible between the body of the testis and the epididymis.

In the course of the operation some pus escaped from beneath the reddened skin; the sinus, and adherent skin associated with it, were excised; the testicle was removed entire. Recovery was uninterrupted.

When cut through in the recent state, the cyst was found to be filled with fat and hair.

The operation was carried out by Dr. Booth, Hankow, Central China, the patient having been an inmate of the blind school there for nine years.

(J. Bland-Sutton. Archives of the Middlesex Hospital, vol. i. p. 19.)

Presented by J. Bland-Sutton, Esq., 1904.

4239 c. A large oval tumour six and a half by three and three quarter inches in its chief diameters, which grew in connection with a retained testicle. The growth is extremely soft and incompletely parted out into lobules of various sizes by septa of connective tissue continuous with the tunica albuginea. Except at the upper end of the specimen the tunica vaginalis has been cut away. A coarse plexus of large flattened veins ramifies in the covering of the growth, which histologically is a round-celled sarcoma of alveolar type.

W. S., æt. 31, admitted into the Great Northern Hospital, Aug. 1902. The scrotum had always been very small. Two years previously he first observed a small swelling, the size of a walnut, in the right groin, which gradually increased, though more rapidly during the last three months, to its present size: the growth of the tumour was painless. On the left side, just beyond the external ring, was a small soft body, the size of a broad-bean, representing the left testicle. At the operation the tumour was found to lie on the aponeurosis of the external oblique, and was readily enucleated except where attached to the spermatic cord, and at its lower and inner part, where it was connected with the scrotum by a plexus of large tortuous veins. The inguinal canal was laid open in order to allow of ligation of the cord as high as possible.

[Mounted in 50 per cent. glycerine.]

Presented by E. C. Stabb, Esq., 1904.

4289 a. The testicle of a fully-grown South-down Sheep, upon which, when a lamb, double vasotomy was performed, the vas deferens being ligatured in two places and divided between.

The distal end of the vas has been dissected out to display the interruption of the duct resulting from the operation.

Notwithstanding the occlusion of its duct, the testicle has grown to the full size, and except for some abnormal dilatation of the rete in the centre of the divided surface, the glandular substance is macroscopically quite normal. Microscopic examination shows active spermatogenesis in progress in nearly all the tubuli. The material from the lower end of the dilated vas consisted of densely crowded spermatozoa.

(S. G. Shattock and C. G. Seligmann. *Proceedings of the Royal Society*, vol. lxxiii. p. 49.)

*Presented by S. G. Shattock, Esq., and
C. G. Seligmann, Esq., 1904.*

4355 o. A much enlarged prostate, which was removed by operation. In its longer antero-posterior diameter it measures three and a half inches. The left lobe is considerably more enlarged than the right. There is no differentiated median eminence or third lobe, the enlargement forming a semicircular but asymmetrical projection within the neck of the bladder. In the removal of the gland, the muscular "capsule" has been torn through anteriorly and the anterior commissure parted up with the aim of isolating and preserving the urethra. A dissection has been carried out to show how far this has been effected. At the highest part of the specimen, on either lobe, an extensive flap of the vesical mucosa is displayed, that on the right lobe having been raised upon a rod of white glass, that on the left having been transfixated. From these flaps the mucosa is prolonged through the bore of the gland almost as far as its lowest limit. In consequence of the increased growth of the glandular tissue, the potential capacity of the canal has been widely increased, the urethral mucosa being as a result so thinned as to be hardly traceable. On the left lobe, proceeding from above downwards, a black bristle has been inserted beneath the edge of the urethral mucosa, which is here so extremely thin that it hardly admits of being raised by the most delicate dissection ; its proper character, however, is shown

not only by its direct continuity with the flap of thicker mucosa on the vesical aspect of the lobe, but also by microscopic examination, which reveals a complete mosaic of prominent epithelium over its inner surface. The torn edge of the lowest limit of the thinned urethral mucosa is demonstrated upon two pieces of white glass rod ; and microscopic examination of portion of this shows it to be completely lined with a proper urethral epithelium. Proceeding to the opposite, the left lobe, the smooth thin urethral membrane which is traceable from the rugose area at the neck of the bladder has been obliquely torn in the operation ; the edge of the membrane beyond the tear is displayed upon two black bristles, and this area will be found continued superiorly into a wrinkled triangular flap, beneath which a rod of white glass has been inserted.

From a gentleman, æt. 64, unmarried. In 1893 the patient experienced some difficulty in micturition, which was treated by catheterisation and intravesical injections. A severe attack of cystitis ensued. This subsided, but led to an entire dependence on the catheter.

In May 1903 he consulted the donor of the specimen, for the reason that he had on several occasions passed blood with his urine after exertion,—the last time in great quantity. There was no accompanying pain. Urine, sp. gr. 1022 ; acid ; clear ; free from albumen and sugar. Rectal examination showed that the prostate was greatly enlarged.

On May 21st, 1903, suprapubic cystotomy was performed, and seven small faceted calculi of uric acid were removed from a very deep post-prostatic pouch. The enlarged gland was then enucleated with the forefinger. In the recent state it weighed seven and a quarter ounces.

The patient made an excellent recovery. The tube was removed on the third day ; urine passed naturally on June 6th, and the patient left town on June 26th, the operation wound being at that date soundly healed.

In Oct. 1903 he was again seen. At that time the urine was passed without difficulty or pain ; and could be held all night, and from four to eight hours in the day.

(S. G. Shattock. *Path. Soc. Trans.* vol. iv.)

Presented by A. Pearce Gould, Esq., 1904.

4360 F. A vertical section of the pelvic organs of a child.

Between the base of the bladder and the rectum, and intimately associated with each, there is a large tumour

about four inches in its chief vertical diameter, which has grown apparently in connection with the prostate gland.

The summit of the tumour, which is smoothly covered with the displaced peritoneum, projects far into the abdominal cavity and considerably overtops the urinary bladder. Inferiorly it extends, intimately incorporated with the urethra, as far as the root of the penis. The growth almost surrounds the neck of the bladder and infiltrates the muscular tissue of the base of that viscus, into the cavity of which it has commenced to project.

In its highest part there is an irregular area due to softening, the increased vascularity about which suggests that the softening was due to an inflammatory process. Histologically, the neoplasm is a spindle-celled sarcoma.

From a child, seven and a half years of age, admitted to the Leeds Infirmary with symptoms of retention of urine and distended bladder. As phimosis was present, circumcision was carried out, but led to no improvement. The abdominal swelling was not diminished by the passage of a catheter. Exploratory laparotomy revealed a mass behind the bladder, between it and the rectum, which was diagnosed as malignant.

No secondary growths were found at the autopsy.

[Mounted in 50 per cent. glycerine.]

Presented by the Leeds General Infirmary, 1904.

4584 I. A Fallopian tube, the distal extremity of which for a length of about three inches is considerably enlarged by the growth of a tumour. The new formation is attached by a very limited area, the chief, proximal portion being free and distending the tube without involving its wall.

Both the free surface and that divided display a compact papillary construction. A microscopic examination made near the abdominal ostium, where the tumour is connected with the mucosa, reveals the infiltrating character of its base, the neoplasm falling, therefore, into the class of papillary carcinoma.

From a childless married woman, æt. 57, in whom the menopause occurred at forty-nine. For many years she had had an abdominal tumour of some kind, but this (a uterine fibromyoma) caused little inconvenience. In the early part of 1892 she

became subject to an irregular but rather frequent flow of blood from the vagina.

Hysterectomy was carried out, both ovaries and Fallopian tubes being removed.

A process of soft growth protruded from the ostium of the left tube. The dilated ampulla rested in a peritoneal recess near the brim of the pelvis and by the side of the rectum. The growth projecting from the ostium had infected the adjacent peritoneum, and a ring of soft growth surrounded the terminal part of the tube: in addition to this, here and there along the peritoneum over the rectum other nodules of growth were detected.

When cut up in the recent state after removal, the whole length of the diseased tube as far as the uterus contained blood.

The fibromyoma occupied the posterior wall of the uterus, and had a diameter of four and three quarter inches; the diseased tube ran over the tumour and was elongated to twice its normal length.

(J. Bland-Sutton. *Trans. Obstet. Soc.* vol. xliv. p. 311.)

Presented by J. Bland-Sutton, Esq., 1904.

4703 d. A foetus at term, together with the placenta, removed by operation in a case of what was probably gestation in the right Fallopian tube, and in which the foetus was retained in the abdominal cavity after escaping from the tube. The foetus is accurately invested with the collapsed membranes, portions of which, however, have been removed.

From a woman who became pregnant in Nov. 1901. The apparent irregularity of the uterus in March 1902 led to the suspicion that there was a sessile myoma on the left side of the uterus incarcerated in the pelvis. In May the suspected tumour could no longer be felt in the pelvis, and the case seemed one of natural uterine pregnancy, the placental hum and the foetal heart being particularly audible. In August the patient had great pains, as of labour, for a day: in September menstruation reappeared and was repeated in October. The abdomen was now markedly diminishing. On examination, a foetus was found lying transversely in the abdomen, but quiet and immovable: the breasts still contained milk, and the uterus could be felt of the normal size.

Oct. 27th, 1902, the abdomen was opened and the foetus removed: the placenta, of the size and shape of a cricket-ball, occupied the right half of the pelvis: adherent to the amniotic surface of the placenta was a double loop of ileum, which was carefully freed. The stump of the left Fallopian tube and the adjacent segment of the mesosalpinx were secured with a silk ligature. The uterus, rectum, and uterine appendages were

matted together in such a way as to prevent any positive recognition of the various structures. The placenta seemed to be lodged in a spoon-shaped expansion of the ampullary portion of the Fallopian tube.

The donor regarded the case as one in which the "amnion" had "eroded" the tube and intruded itself into the peritoneal cavity. (J. Bland-Sutton. *Trans. Obstet. Soc.* vol. xliv. p. 318.)

Presented by J. Bland-Sutton, Esq., 1904.

4720 a. A portion of the foetal membranes of a cretinous calf, so distended from oedema as to lie in voluminous translucent folds.

So widely have the villi of the cotyledons been disparted by the collection of fluid that the latter are for the most part hardly distinguishable. It is noteworthy that the villi themselves have not participated, there being no condition present comparable to that of the cystic change found in a hydatidiform mole. The disparted villi are mostly atrophied. The degree of oedema may be well observed in the divided right-hand edge where the swellings cut through display only a few extremely delicate fibres of connective tissue crossing the oedematous spaces. The membranes were removed by the veterinary surgeon after the cretin had been delivered by embryotomy.

(C. G. Seligmann. *Trans. Path. Soc.* vol. lv., and *Journ. of Pathology*, vol. ix. p. 311.)

Presented by C. G. Seligmann, Esq., 1904.

4739 c. An enlarged breast which was removed from a Negro.

The gland measures two and a half inches in diameter, and nearly one and a quarter in extreme thickness.

Microscopic examination shows the chief tissue present to be densely fibrous, but the number of acini distributed through it corresponds fairly with the normal, and the condition must, therefore, be classed as hypertrophic. In a few spots there is evidence of interstitial inflammation, and the epithelium is abnormally proliferating.

The breast was excised, with its fellow which was equally enlarged, from a negro of Western Kordofan. The patient was

between fifteen and sixteen years of age. He stated that his sexual powers were complete, and that the breasts used to swell under sexual excitement.

Presented by St. Thomas's Hospital, 1904.

4792 c. A slice from a breast taken so as to include the nipple.

In the cut surface are displayed three scirrhouous carcinomata. The neoplasms lie in linear series, the lowest being somewhat smaller than the other two. Microscopic sections of the higher connecting isthmus reveal the presence of carcinomatous cell groups throughout its length; the sections of the longer lower isthmus show only breast tissue in the particular plane examined.

From a patient, æt. 36, the mother of four children. No previous trouble had been experienced in the breast. Five and a half months before admission to the Middlesex Hospital she noticed a firm lump in the outer part of the left breast; six weeks later, there was noticed a second firm tumour below and external to the nipple, and six weeks before admission the patient observed a third tumour immediately beneath the nipple. Free excision was carried out, the axillary glands and portion of the pectoralis major being removed with the breast.

[Mounted in 50 per cent. glycerine.]

Presented by A. Pearce Gould, Esq., 1904.

TERATOLOGY.

53 A. The head of a Calf the subject of anterior dichotomy. Each head is fairly complete, and furnished with two eyes and two auricles.

The central nervous system has been exposed from behind. The two brains are quite distinct, and the spinal cord doubled for some distance into the cervical region.

Presented by W. B. Tegetmeier, Esq., 1904.

171 A. Two irregular odontomata, of composite structure, which were successfully removed from the temporal bone of a Colt, three years old; the larger measures nearly two and a half inches in its larger axis.

Of the upper a section has been made to show the

complex involutions of enamel in the midst of the dentine : the enamel is traceable to the free surface at the expanded end of the tumour.

(J. Bland-Sutton. *Transactions of the Odontological Society of Great Britain*, vol. xxxvi. 1903, p. 10.)

Presented by E. R. Harding, Esq.

515 A. The fused semilunar and cuneiform bones of each hand of a Sudanese. The variation has as yet been observed only in African races.

Presented by Professor G. Elliot Smith, 1904.

561 B. The liver of an adult exhibiting a remarkable degree of abnormal lobulation, not a few of its subdivisions being quite disconnected (except probably by ducts) with the main gland. The condition is probably congenital in origin, the organ presenting no signs of disease.

From a woman who died from the rupture of a tubal gestation.

Presented by St. Thomas's Hospital, 1904.

729 A. Two diminutive eggs, the upper from a Scotch Canary, the lower from a Duck.

The canary had laid normal eggs before, and laid normal eggs after, the above.

Both the eggs are probably constituted only by small portions of albumen invested with shell.

Presented by W. B. Tegetmeier, Esq., 1904.

735 A. Half of the shell of a bird's egg, at the narrow pole of which there is a twisted tubular process. As seen on the inner aspect, the chalaza is prolonged into the process noticed which on the deep side is completed by the shell-membrane. 1904.

735 B. Half of the shell of a Fowl's egg, at the end of which there is a convoluted tubular process. On the inner aspect

the shell is completed in the situation of the process mentioned, though for the most part the shell here is discontinuous with the rest.

At the lowest part of the closing plate of shell there is an aperture through which the chalaza probably reached the tubular process beyond, as in the foregoing specimen.

Presented by Mr. George Birch, 1904.



